REMARKS

Examiner Interview

Applicant's Attorney interviewed the Examiner and his SPE on March 16, 2011 – the SPE was a signer on Final Office Action. Many issues relating to the case were discussed, but little if any movement resulted.

There was no mention of an Interview Summary at the end of the interview. Applicant was not sure if the Examiner intended to write one, so Applicant decided not to wait to file a response to the Final Office Action. Applicant reserved the right to comment upon any Interview Summary written by the Examiner for this interview. Soon after Applicant's response to the Final Action was filed, Applicant got an Interview Summary from the Examiner; the substance of the interview section of the Summary is reproduced below.

Applicant had, soon after this interview and before getting the Interview Summary from the Examiner, also submitted an IDS covering references that Applicant read from during the interview (not previously on the record) to counter the Official Notice taken by the Examiner regarding the relationship between aspen and birch. Applicant went to the trouble and expense to make this submission, because it appeared that the Examiner did not give these references proper consideration during the interview, despite USPTO rules and case law discouraging taking Official Notice. The Examiner's reaction to these references is taken up below.

The following is a reproduction of the Substance of the Interview written by the Examiner for the interview. Note that Applicant corrected some obvious errors which were probably caused by the scanner used to get the Examiner's words into WORD format so they could be included here.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: The examiner agreed that claims 11

and 12 were allowable over the prior art. The examiner also agreed that if claim 10 was amended into claim 20, that claim 20 would be allowable. Agreement was not reached on the remainder of the claims. Attorney Richard asked for the interpretation of the claim that the examiner was using for instant claim 1. The examiner stated that he was interpreting claim 1 such that the cooking aid portion of the cooking mixture was at the percentages given but that the claim said nothing about the percentage of wood or the water content of said cooking mixture. Attorney Richard brought up the claim construction of the term "about". The examiner stated that no definition of the term "about" was given in the specification and asked for the claim construction that the attorney felt should be given to the word "about". The examiner suggested deleting the term "about". Finally the differences between birch and aspen were discussed. Attorney Richard stated that birch and aspen had different densities and fiber lengths. The examiner countered that the important similarity was that they both has high fatty acid contents but low resin acid contents and both had similar pitch problems according to DUNLAP. Finally attorney Richard stated that it wasn't conclusive that DTO was better than TO. The examiner argued that DUNLAP made the conclusion that DTO was better. Attorney Richard argued that DUNLAP only used one DTO and only used one TO.

After the interview, Applicant decided to write new method claims as suggested by the Examiner; there was apparently a miscommunication of sorts as to what combination of existing claims the Examiner said would work (be allowable) here. Now that Applicant has seen in the Interview Summary which claims the Examiner intended, Applicant will proceed accordingly. Applicant believes that the new claims presented in the previous response should be allowable as well given that the Examiner stated that claim 12 represented allowable subject matter.

Applicant may or may not agree with statements made by the Examiner in the Interview Summary. Most, if not all, of the topics mentioned will be discussed further below.

Claim Amendments

Claims 11 and 12 were cancelled and were rewritten in independent form as new claims 27 and 28, as it was more convenient for Applicant. Claims 25 and 26 from the previous response were Not Entered by the Examiner; they are not presented again here despite the fact that they should have been entered (see below), since Applicant did not now want to pay the extra charges the would have been the net effect of keeping them, so Applicant prefers that they not be entered now as a result. Claims 29-35 are also New.

Claim 29 is a narrower version of claim 28. Claim 30 is based on a combination of claims 17 and 28 (28 being the same as claim 12), and claim 31 is a narrower version of claim 30. Claim 32 is based on a combination of claims 10 and 20, as suggested by the Examiner, and claim 33 is a narrower version of claim 32. Claim 34 is based on a combination of claims 20 and 28 (28 being the same as claim 12), and claim 35 is a narrower version of claim 34.

Allowable Subject Matter/Claims

Applicant acknowledges the Examiner's conclusion concerning allowability of the subject matter of claims 11 and 12 and the combination of claims 10 and 20. Applicant may or may not agree with each of the reasons the Examiner has given. Applicant still maintains that the base claims from which such depend (claims 1 and/or 10) are allowable, as are all other claims in the case.

All the new claims (27-35) derive from the allowable subject matter cited here and so are allowable and do not create any issues for the Examiner and should be entered and declared allowed by the Examiner.

Response to Arguments

Applicant is surprised to see that the Examiner has so little if anything to agree with in the arguments presented by Applicant in the previous response in this case. Since Applicant felt that the Examiner (and his SPE as signatory on the Final and Advisory Actions) was not really addressing all of Applicant's arguments (some even presented

more than once), Applicant's Attorney was instructed to contact the applicable Group Director to protest. However, after further consideration of the Advisory Action, it was decided that one more try with the Examiner would be more appropriate before taking other action.

Arguments

As to the issue of claims 25 and 26 not being entered, the Examiner should note the following. The required excerpts are first taken from claims 1, 10 and 12 as follows.

From claim 1: the wood cooking aid comprises a fatty acid component and a rosin acid component and/or salts thereof, and wherein said cooking aid comprises about 70 to about 2% fatty acids, about 20 to about 98% rosin acids, and less than about 15% unsaponifiable material.

From claim 10: wherein said fatty acids comprise a monomer part produced during dimerization of fatty acids.

From claim 12: wherein the fatty acid distribution of said monomer part is branched oleic acids about 14 to about 16%, branched stearic acid about 13 to about 15%, oleic acid about 19 to about 21% and other fatty acids about 42 to about 44%.

Thus, the wood cooking aid of claim 12 comprises a fatty acid component and a rosin acid component and/or salts thereof, and wherein said cooking aid comprises about 70 to about 2% fatty acids, about 20 to about 98% rosin acids, and less than about 15% unsaponifiable material; said fatty acids comprise a monomer part produced during dimerization of fatty acids; and the fatty acid distribution of said monomer part is branched oleic acids about 14 to about 16%, branched stearic acid about 13 to about 15%, oleic acid about 19 to about 21% and other fatty acids about 42 to about 44%.

There is no 112 problem in claims 25 and 26; what is claimed is totally clear, and this in no way increases issues. The wood cooking aid is defined as shown here, and the fact that

it is mixed with hardwood particles to form a wood cooking mixture in claims 1, 10 and 12 is irrelevant in claims 25 and 26. Claims 25 and 26 should have been entered, but as explained above, Applicant prefers they not be entered now - other similar claims are presented here instead, and this discussion may be relevant to them should the Examiner find similar issues with the new claims.

As to the Examiner's arguments from the bottom of page 2 to just before the discussion on "about" on page 5 of the action (all related), even if the Examiner is correct here, there is still one issue that the Examiner continues to avoid – specifically, the effect of the method of Farley. Dunlap states the dilution is by the method of Farley – apparently this is not just some simple mixing with a solvent, or the method would not have a special name. There is no explanation as to what this method involves in Dunlap, nor has the Examiner produced one from elsewhere in the prior art, *despite being asked about this in the last two written responses by Applicant*. The method of Farley could involve say heating and/or use of reagents that would change the ratio of relevant components (which would certainly be a problem for the Examiner's use of Dunlap for rejection of any of the present claims) for all that is known about it on the record now. All the outstanding rejections depend on this point, so the Examiner's failure to provide this information renders all rejections incomplete at best. Thus, it is improper to maintain them and making the previous action final is also improper. Under the circumstances, the Examiner is obligated to withdraw the finality of the previous action and to either present complete and proper rejections in a new non-final action or allow all the claims in the case.

Applicant does not understand the Examiner's point about the method claims at the bottom of page 4 and top of page 5 of the present action. Applicant does not think that the Examiner has correctly characterized at least some of the points on page 5 allegedly made by Applicant regarding dilution. The Examiner should note that when/how the dilution takes place in Dunlap may be crucial – but determining this requires that the method of Farley be known, and the Examiner has once again failed to make this happen.

As to the use of "about" from the bottom of page 5 of the present action, "about" in numerical ranges in claims is common and to define it in a specification would be rather pointless. If one had defined it, then why use it at all in a claim instead of merely adjusting the numbers defining the range accordingly? It may be helpful for the Examiner to consider *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990), where the prior art taught carbon monoxide concentrations of "about 1-5%" while the claim in question was limited to "more than 5%"; the court held that "about 1-5%" allowed for concentrations slightly above 5%, thus the ranges overlapped. In cases not this clear cut, one could always rely on how those of ordinary skill in the art would interpret "about" in the context of the case at hand. One thing is for certain though, the Examiner's interpretation is unreasonable as explained in Applicant's response to the Final Action, since using "about" that way could result in huge increases to the base stated range which is clearly not how those of ordinary skill in the art would interpret "about" in realistic contexts.

As to the Examiner's application of the KSR decision (see page 6 of the present action), Applicant first offers a quote from *In Eisai Co. Ltd. v. Dr. Reddy's Labs, Ltd.*, 533 F.3d 1353 (Fed. Cir. 2008): "[t]o the extent an art is unpredictable, as the chemical arts often are, KSR's focus on these 'identified, predictable solutions' may present a difficult hurdle because potential solutions are less likely to be genuinely predictable."

The present claims are chemical, and the Dunlap reference provides one and only one data point for the Examiner as Applicant has previously pointed out. It is impossible to determine any kind of trend (prediction) from only one data point.

Further, Applicant maintains that the Examiner is suggesting substituting birch for aspen for the reasons given in the previous response. Any distinction is not merely subtle as the Examiner states, but rather it is "metaphysical" (i.e. non-existent). There has to be a basis for predictability, and Dunlap uses aspen not birch, so the substitution is being suggested by the Examiner whether he realizes it or not.

The Examiner states that he is using rational D from KSR. MPEP 2143 gives the proper analysis here as follows:

D. Applying a Known Technique to a Known Device (Method, or Product) Ready for Improvement To Yield Predictable Results

To reject a claim based on this rationale, Office personnel must resolve the *Graham* factual inquiries. Then, Office personnel must articulate the following:

(1) a finding that the prior art contained a "base" device (method, or product) upon which the claimed invention can be seen as an "improvement;"

(2) a finding that the prior art contained a known technique that is applicable to the base device (method, or product);

(3) a finding that one of ordinary skill in the art would have recognized that applying the known technique would have yielded predictable results and resulted in an improved system; and

(4) whatever additional findings based on the *Graham* factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

The rationale to support a conclusion that the claim would have been obvious is that a particular known technique was recognized as part of the ordinary capabilities of one skilled in the art. One of ordinary skill in the art would have been capable of applying this known technique to a known device (method, or product) that was ready for improvement and the results would have been predictable to one of ordinary skill in the art. If any of these findings cannot be made, then this rationale cannot be used to support a conclusion that the claim would have been obvious to one of ordinary skill in the art.

Applicant does not see that the Examiner has successfully done this entire analysis. Most significantly, how are the present claims using birch predictable from Dunlap using aspen? And how is the one, single data point in Dunlap any basis for predictability of using aspen with different cooking aids, much less using birch. It is of note that the Graham factors that must be found in this analysis require looking at differences – such as birch versus aspen.

There are two other issues here. Dunlap does not show that distilled tall oil is superior generally. First, there was only one distilled tall oil used here against one each of several different types of materials. What exactly does that prove? Second, Dunlap does NOT show that even the one distilled tall oil used is uniformly superior to the other materials tested against it (see table 3 page 377 for example). Applicant has repeatedly pointed this out, and the Examiner seems to have repeatedly ignored this inconvenient fact. Further discussion on the mixed (rather than superior) results with DTO is given below.

It is also of note that the DTO (distilled) and CTO (crude) used in Dunlap do not seem to be related; by related, Applicant means that the DTO would be made from the CTO or something similar to it. How can one fairly compare the results between the DTO and CTO used in Dunlap? This is especially a problem for the Examiner when he tries to justify extension of the results of Dunlap via Magee. One thing that Magee does show is that tall oils do vary considerably in composition; thus a showing that one DTO may work better than an unrelated crude tall oil does not show superiority of DTO's over crude tall oils generally. Dunlap's results are very limited as Applicant has repeatedly pointed out.

Another thing bears mentioning here. To support his contention of predictability, the Examiner states that two woods with similar chemical compositions will act similarly in response to added chemicals. Really? The physical structure of different woods is a factor that the Examiner ignores in making this statement; added chemicals must come into contact with components inside the wood for any kind of reaction or action to take place. Birch is much denser than aspen (see below), so even if "similar" in chemical composition, they would not be that similar in behavior in the presence of added chemicals; birch would be expected to be more resistant to chemical treatments.

Further, what does the Examiner mean by "similar" anyway? Predictability is the issue here, so would mere similarity be enough? It is of note that MPEP 2112.01 states: "[w]here the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established." It goes on

to say that "[t]herefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product."

As to the new IDS references and Ragauskas (see pages 7-8 of the present action), the Examiner casts aside Applicant's references from Wikipedia as not reliable. First, these references were submitted because the Examiner had taken "Official Notice" that aspen and birch were "similar". As stated above, there is the issue if mere similarity is enough here in the first place. Moving beyond that, it would seem to Applicant that since it is really improper to take "Official Notice" as the Examiner did here, that when Applicant has presented any reference to refute the Examiner, that the Examiner should respond with a more "reliable" reference showing that Applicant is wrong and not just say Applicant's is unreliable and move on. Wikipedia does not allow just anyone to modify articles as it did in the past for one thing. And for another, as explained above, chemical composition by itself is not dispositive here, and the issue is predictability as the Examiner has put it. The Wikipedia references show that aspen and birch are very different in taxonomy which suggests that they are very different in many ways. This is relevant. Does the Examiner have evidence to the contrary?

The Chimney Sweeps reference shows that birch is much denser than aspen, and this is very significant in predicting reactivity as explained above. It is also of note that aspen's density is more like pines (softwoods) than birch (another hardwood).

The Examiner should reread the Maple reference. Figure 1 is irrelevant; comparing a typical hardwood to a typical softwood has no bearing on birch versus aspen as they are both hardwoods. Similarly, the data in Figure 2 is irrelevant. Page 2 of the reference does not actually say that aspen and birch are available in mixed pulps, but it does say that they come in pure pulps; in any case where does it say that the basis for mixed pulps is that the woods are close in properties? Maybe one makes up for a deficiency of another and vice versa, or maybe they happen to grow close together, and it is too hard to separate them when cutting. Fiber lengths are 30% different – how is that even similar? Diameters are not that close either. In any case, the wood chips/particles have to be broken down quite a bit before fibers are exposed during processing.

Further, the Maple reference contrasts maple, aspen and birch; not only are there differences in aspen and birch, but the differences found when comparing all three (hardwoods) indicate that hardwoods are not a close knit group property-wise. Thus, sweeping generalizations as to birch and aspen being so similar since they are hardwoods are not warranted.

Where in Dunlap does it say the birch and aspen have the "same" resin (or is this pitch not resin) problems as the Examiner contends on page 8 of the present action? The fact that birch and aspen are both northern hardwoods means what? Birch and aspen are taxonomically very different. Applicant does not agree that both being hardwoods means that they are similar chemically (whatever "similar" means). The designation of a tree as hardwood in general is probably more due to physical structure than anything chemical.

Ragauskas' showing of close cellulose content is no surprise as we are talking wood here. The lignin contents are 20 % different (and lignin may determine how quickly pulping can take place since it acts as the "glue" that holds the wood particles together, keeping the fibers together) and the hemicellulose contents are almost 25% different. How is that similar? On page 366 of Dunlap it states that the amount of extractives is probably not as important as the exact types present, so the fact that the overall extractive amounts are close seems of little use to the Examiner's argument. Dunlap does not say that the pitch problems are similar only that they both have pitch problems; both woods may have the esters of cycloartenol, but how much does each contain? The fact that Dunlap based the amount of tall oil used in his work with aspen that was "suggested" for birch is of uncertain significance; he had to start somewhere and maybe this would allow a good comparison with birch – which does not appear to have been done. Applicant's argument is NOT as the Examiner characterizes it on the bottom of page 8 of the present action – the Examiner appears to again wish to generalize from one data point which is not proper.

As to the issue of extractives on page 9 of the present action, if as the Examiner states the extractives are primarily fatty acids, then Dunlap's statement that the type of extractive is more important than the overall amount would indicate that the type of fatty

acids present are important. So how do aspen and birch compare here? Applicant sees nothing in Dunlap on this – does the Examiner?

What Applicant claims and what one of ordinary skill in the art would get from Dunlap are unrelated. Applicant's specification teaches hardwoods generally and birch in particular, and there is no requirement to do more than that. Dunlap uses aspen in a very limited testing scheme and mentions some other tree types but does not present any data beyond aspen, so Dunlap offers nothing beyond very limited results on aspen. The Examiner is comparing apples and oranges here.

As to long felt need on pages 9-10 of the present action, the Examiner has defined the situation as long felt need for deresination of birch. It is convenient for the Examiner to define this so broadly. However, Applicant's specification defines the problem for which there is a long felt need for solution a bit differently. The main problem is that too much of the extractives present in hardwood (such as birch) remain in the pulp after prior art processing which leads to problems when this pulp is used in other processes such as paper making. It is also desirable that the materials used to remove the extractives be inexpensive and easy to dispose of after processing. The specification indicates that this has been a problem without solution for many years; this is also supported by the disclosures of Dunlap (published in 1989), and the Examiner apparently could not find any reference since Dunlap using hardwoods and birch in particular in the right context, or he would have cited it, so presumably no such reference exists. Even with Dunlap, there is only a showing of one DTO (with aspen only) that is not always better; it would be desirable to find a variety of suitable DTO's and similar materials that solve the problem. The examples and disclosure in the specification indicate that the problem is solved with the present invention (they do not refer only to birch but to hardwoods generally as well); the key being the ratio of components in the cooking aid – it is not required that the cooking aid be based on distilled tall oil as the cooking aid may also be made starting from pure fatty acids etc. Those of ordinary skill in the art would know the amounts to use based on the size of the cook involved.

As to the no slam dunk issue on page 10 of the present action, how does one data point work all the miracles the Examiner cites here? How can there be reasoning on why DTO works well when there is only one data point to look to here? Mere speculation is more like what is going on here. The Examiner cannot rely on Magee as the jump is too far to make given the limited results in Dunlap. Some improvement looking at one DTO versus one CTO equals motivation to pursue DTO generally and with different hardwoods too? If this is such an easy jump, why did no one try it since Dunlap in 1989 then?

As to better than DTO sometimes on page 11 of the present action, the Examiner should look at Dunlap's table 3 again – in particular look at first wash filtrate neutrals using CTO versus DTO and also at black liquor total and neutrals using gum rosin versus DTO. Applicant has repeatedly pointed to this, but has been ignored. Figure 2 shows gum rosin better than DTO at lower concentrations for total extractives and figure 3 similarly for neutrals. Figure 4 shows that DTO is not always best as the Examiner admits. There are many instances where even if the DTO gives the best results, they are not all that much better than when other materials are used. The situation is not as clear cut as the Examiner insists. In fact, Dunlap states (page 373, second full paragraph) that there may still be advantages to using CTO for deresination despite the results with DTO – sounds like a teaching away to Applicant. And again, only one DTO is tested here and only on aspen.

As to dilution issue on page 11 of the present action, this has been discussed above. The method of Farley has not been explained by the Examiner.

As to jump from Dunlap to Magee on pages 11-12 of the present action, why would one of ordinary skill in the art believe any of the conclusions the Examiner says are made by Dunlap considering that there is only one data point tested in Dunlap, and the results show that the one DTO tested is not always best? And how do we make the jump to Magee then? Even if it might be expected that DTO's would remove some extractives, the issue is how much and would one of ordinary skill be motivated to do anything about this, given that many other materials would probably remove extractives also. It would take more than routine experimentation to find an optimum here as well. Applicant is not

sure what the Examiner means by the comment on the top of page 12, or how it is relevant here.

Dunlap says the ratio concerning saponifiables is a ***possible*** factor – there is not enough data in Dunlap to give this much credence. In any case, is this ratio quantified by Dunlap?

As previously discussed, the DTO and CTO used in Dunlap do not seem to be related; by related, Applicant means that the DTO is made from the CTO or something similar to it. How can one fairly compare the results between the DTO and CTO used in Dunlap? This is especially a problem for the Examiner when he tries to justify extension of the results of Dunlap via Magee. One thing that Magee does show is that tall oils do vary considerably in composition; thus a showing that one DTO may work better than an unrelated crude tall oil does not show superiority of DTO's over crude tall oils generally.

As to the Sylvatal 40DD reference citation on page 12 of the present action, Applicant thanks the Examiner for adding this to the notice of references cited.

As to the Farley and dilution issues on page 12-13 of the present action, Applicant is somewhat confused about what the Examiner is saying here as to dilution. However, the Examiner has not addressed the issue of Farley, and the withdrawal of rejections based on the Examiner's failure to explain what Farley's method does. This was taken up earlier, but Applicant will add here that for all anyone knows with what is on the record now, Farley could involve heating and/or addition of reagents such that the ratio of components would change and/or new components appear which would create a problem for the Examiner's arguments.

Rejections

The Examiner did not restate the rejections from the previous action here, but Applicant assumes that he is maintaining them. Applicant maintains the arguments made in his previous response as "amended" by any applicable comments made here.

claim rejections in future. In the last two responses, Applicant has followed the Examiner, but must object to continuing with this as it obscures where the claim rejections stand.

Conclusion

In view of the remarks and amendments above, Applicant believes that the claims as they now stand are in a condition for allowance. Prompt allowance of all pending claims is respectfully requested.

In the event that the Examiner is not willing to allow the claims as they now stand, then Applicant requests that the Examiner contact Applicant's Attorney as soon as possible.

If it would be helpful in resolving any issues in this Application, the Examiner is invited to contact Applicant's Attorney, Charles R. Richard, at 202-246-3320.

Respectfully Submitted,

Date: 4/18/2011

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